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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/753,728	01/03/2001	Makoto Araki	1232-4672	3779
27123	7590	12/21/2005	EXAMINER	
MORGAN & FINNEGAN, L.L.P. 3 WORLD FINANCIAL CENTER NEW YORK, NY 10281-2101			MEINECKE DIAZ, SUSANNA M	
			ART UNIT	PAPER NUMBER
			3623	

DATE MAILED: 12/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/753,728

Applicant(s)

ARAKI ET AL.

Examiner

Susanna M. Diaz

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-89 is/are pending in the application.
- 4a) Of the above claim(s) 5, 19, 27, 41 and 49-87 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-18, 20-26, 28-40, 42-48, 88 and 89 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>12/6/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on December 6, 2005 has been entered.

Claims 1, 4, 8, 22, 23, 26, 30, and 44-48 have been amended.

Claims 5, 19, 27, 41, and 49-87 stand as withdrawn.

Claims 1-4, 6-18, 20-26, 28-40, 42-48, 88, and 89 are presented for examination.

2. The previous objection to claim 44 is withdrawn in response to Applicant's amendment of claim 44.

The previous rejection under 35 U.S.C. § 101 is withdrawn in response to Applicant's persuasive argument.

The previous rejections under 35 U.S.C. § 112 are withdrawn in response to Applicant's claim amendments; however, new rejections regarding antecedent basis are set forth below.

Response to Arguments

3. Applicant's arguments filed December 6, 2005 with respect to the art rejection have been fully considered but they are not persuasive.

Applicant argues that "Yuri's work distribution is not based on user-selected manufacturing conditions. Accordingly, Yuri fails to teach, disclose or suggest 'assignment means for dividing the plurality of work units in accordance with the user-selected manufacturing condition' as recited in applicants' claim 1." (Page 26 of Applicant's response) The Examiner respectfully disagrees. Yuri's system operator updates the worker database and product database (col. 10, lines 23-31, 50-57). It is the data in these databases that is used to distribute work accordingly (col. 10, lines 33-35); therefore, the Examiner submits that, by inputting data needed to distribute work, the system operator is effectively inputting user-selected manufacturing conditions. Any element of the manufacturing process (e.g., tasks required for manufacturing a given product, worker efficiency relevant to a given manufacturing project, etc.) is deemed to be a "manufacturing condition."

In conclusion, Applicant's art-related arguments are non-persuasive; therefore, the art rejection is maintained. Furthermore, now that Applicant's current claim amendments overcome the previous rejection of claims 45-48 under 35 U.S.C. § 112, 2nd paragraph, claims 45-48 will be rejected based on their merits as well (please see below).

Priority

4. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Japan on January 6, 2000 and another application filed in Japan on October 26, 2000. The Examiner thanks Applicant for submitting these foreign priority documents.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 46-48 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 46 recites the limitation "said user interface means" in lines 1-2. There is insufficient antecedent basis for this limitation in the claim. Also, claim 46 recites the limitation "said code attachment means" in lines 3-4. There is insufficient antecedent basis for this limitation in the claim. Antecedent basis for both terms is found in claim 45; therefore, for examination purposes, claim 46 will be interpreted as being dependent from claim 45 instead of claim 1.

Claims 47 and 48 are dependent from claim 46 and therefore inherit the same rejection under 35 U.S.C. § 112, 2nd paragraph.

Appropriate correction is required.

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Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1, 2, 4, 8-14, 16, 21, 23, 24, 26, 30-36, 38, 43, and 44 are rejected under 35 U.S.C. 102(e) as being anticipated by Yuri et al. (U.S. Patent No. 6,249,715).

Yuri discloses a work assignment system for assigning and composing a work formed from a plurality of work units to a plurality of stations, comprising:

[Claim 1] display means for displaying names of the plurality of work units (Figs. 1, 11, 13-15; col. 13, line 37 through col. 14, line 63);

condition input means for inputting a user-selected manufacturing condition (col. 10, lines 23-61);

assignment means for dividing the plurality of work units in accordance with the user-selected manufacturing condition and assigning one group of the divided work units to a station (Figs. 1, 11, 13-15; col. 13, line 37 through col. 14, line 63); and

output means for outputting an assignment result of the work units of each station to a work assignment file as a composition plan (Figs. 1, 11, 13-15; col. 13, line 37 through col. 14, line 63);

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[Claim 2] wherein said output means displays the names of the work units assigned to each station in units of stations (Figs. 1, 11, 13-15; col. 13, line 37 through col. 14, line 63);

[Claim 4] wherein each of the plurality of work units has manhour value data, and said system further comprises calculation means for calculating a total manhour of the plurality of work units, and means for entering a value of the total manhour calculated by said calculation means as partial data of the user-selected manufacturing condition (Figs. 11, 13-15; col. 13, line 37 through col. 14, line 63);

[Claim 8] wherein said assignment means comprises user interface means for attaching information representing parallel operation of works to the plurality of work units as the work standard composition targets, and making a plurality of composition plans in consideration of the attached parallel operation and sending the composition plans to said output means (Figs. 1, 11, 13-15; col. 10, line 62 through col. 14, line 63);

[Claim 9] wherein said output means visually displays and outputs the total manhour of the work units of each station (Figs. 1, 11, 13-15; col. 13, line 37 through col. 14, line 63);

[Claim 10] wherein said output means displays the total manhour of the work units of each station in a form of a bar graph (Figs. 9, 10, 12, 13, 15; col. 14, lines 56-63);

[Claim 11] wherein a window of said display means is divided into a first display area and a second display area, and said output means displays the bar graph of the total manhour of the work units of each station in the first display area and the work units belonging to the station in the second display area in units of stations, the stations in the

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first display area and those in the second display area being correspondingly displayed (Figs. 9, 10, 12, 13, 15; col. 14, lines 56-63);

[Claim 12] wherein said output means correspondingly displays the bar graph of the total manhour of the work units of each station and the work units belonging to the station (Figs. 9, 10, 12, 13, 15; col. 14, lines 56-63);

[Claim 13] wherein the assignment result is displayed as the bar graph of the total manhour in units of stations (Figs. 9, 10, 12, 13, 15; col. 14, lines 56-63);

[Claim 14] wherein the assignment result is displayed as a list of work units put together in units of stations and belonging to each station (Figs. 9, 10, 12, 13, 15; col. 14, lines 56-63);

[Claim 16] wherein correction of a station is executed by
deleting the station (Figs. 11, 13-15; col. 11, lines 41-67; col. 13, line 37 through col. 14, line 63; col. 15, lines 29-67 – Element work can be redistributed among work stations),

adding a new station (Figs. 11, 13-15; col. 11, lines 41-67; col. 13, line 37 through col. 14, line 63; col. 15, lines 29-67 – Element work can be redistributed among work stations),

exchanging an arbitrary work standard in the station with an arbitrary work standard in another station (Figs. 11, 13-15; col. 11, lines 41-67; col. 13, line 37 through col. 14, line 63; col. 15, lines 29-67 – Element work can be redistributed among work stations),

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adding an arbitrary work standard to an arbitrary work standard in the station, or dividing a work standard belonging to the station into two stations (Figs. 11, 13-15; col. 11, lines 41-67; col. 13, line 37 through col. 14, line 63; col. 15, lines 29-67 – Element work can be redistributed among work stations);

[Claim 21] wherein said system further comprises a database containing information related to a skill or experience of an operator, and said output means extracts the information related to the skill or experience of operators assigned in units of stations and displays the information together on a display window of said display means (Figs. 9, 10, 12, 13, 15, 20; col. 7, lines 49-62; col. 14, lines 56-63).

[Claims 23, 24, 26, 30-36, 38, 43] Claims 23, 24, 26, 30-36, 38, and 43 recite limitations already addressed by the rejection of claims 1, 2, 4, 8-14, 16, and 21 above; therefore, the same rejection applies.

[Claim 44] Claim 44 recites limitations already addressed by the rejection of claim 1 above; therefore, the same rejection applies.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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10. Claims 3, 6, 7, 15, 17, 18, 20, 22, 25, 28, 29, 37, 39, 40, 42, 45, 88, and 89 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yuri et al. (U.S. Patent No. 6,249,715), as applied to claims 1, 2, 10, 23, 24, and 32 above.

[Claims 3, 88] Regarding claims 3 and 88, Yuri's user (i.e., the system operator) inputs data concerning each worker (col. 10, lines 23-61). Yuri's user does not expressly select an average value of manhours necessary to execute all the work units in the station; however, an operation time value T per worker is calculated (col. 11, lines 44-45) and, later, total manhours required for every area are determined (col. 12, lines 20-46). A total operation time value T per worker must be based on some quantitative estimates and/or observations. Official Notice is taken that it is old and well-known in the art of workforce management to use an average of historical operation time values to estimate an expected operation time value that a worker will spend on a given task. An average typically lends itself to good estimates for a general population of workers. Therefore, the Examiner submits that it would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to allow Yuri's user to select a manufacturing condition that is an average value of manhours necessary to execute all the work units in the station in order to generate simulations that are fairly accurate for a general population of workers.

[Claims 6, 7] As per claims 6 and 7, Yuri discloses means for displaying an arbitrary work unit group (Figs. 11, 13-15; col. 13, line 37 through col. 14, line 63), wherein the arbitrary work unit group is classified into one of a component group formed from a plurality of work units, a model group formed from a plurality of components, a

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representative model group formed from a plurality of models, and a genre group formed from a plurality of representative models (Figs. 1, 11, 13-15; col. 10, line 62 through col. 14, line 63). Yuri does not expressly disclose a user interface means for selecting one or more work units from the displayed work unit group. Instead, Yuri's users manipulate simulation data via an input means used to update worker and product databases (col. 10, lines 23-32). Official Notice is taken that it is old and well-known in the art to allow users to alter simulation constraints via a user interface means that allows for selection of simulation parameters to be changed. This interface allows users to quickly and conveniently alter simulation parameters to facilitate decision making. Since Yuri's invention enables simulation and updating of the parameters thereof, the Examiner submits that it would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to modify Yuri to include a user interface means for selecting one or more work units from the displayed work unit group in order to allow users to quickly and conveniently alter simulation parameters to facilitate decision making.

[Claims 15, 17] Yuri discloses that work may be assigned by deleting the station, adding a new station, exchanging an arbitrary work standard in the station with an arbitrary work standard in another station, adding an arbitrary work standard to an arbitrary work standard in the station, or dividing a work standard belonging to the station into two stations (Figs. 11, 13-15; col. 11, lines 41-67; col. 13, line 37 through col. 14, line 63; col. 15, lines 29-67 – Element work can be redistributed among work stations). Yuri also discloses the generation of bar graphs to represent work allocation

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(Figs. 9, 10, 12, 13, 15; col. 14, lines 56-63). Yuri does not expressly disclose a user interface means for direct corrections and editing of the assignment output. Instead, Yuri's users manipulate simulation data via an input means used to update worker and product databases (col. 10, lines 23-32). Official Notice is taken that it is old and well-known in the art to allow users to alter simulation constraints via a user interface means that allows for selection of simulation parameters to be changed. This interface allows users to quickly and conveniently alter simulation parameters to facilitate decision making. Since Yuri's invention enables simulation and updating of the parameters thereof, the Examiner submits that it would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to modify Yuri to include user interface means for providing a user interface for further correcting the assignment result output by said output means in units of stations, means for receiving editing information input by said user interface means and correcting the assignment result, wherein correction of a station is executed and correcting a length of a bar graph of the station related to the correction in accordance with a correction unit in order to allow users to quickly and conveniently alter simulation parameters to facilitate decision making.

[Claim 18] Yuri does not expressly disclose the authentication of a user, yet Yuri states, "the phrase 'system operator' does not mean a worker who only handles a system, but rather, a chief engineering staff, line leader or the like in the field" (col. 10, lines 56-59). Clearly, Yuri's users are meant to be specific people in charge of work assignment as opposed to any random user. Official Notice is taken that it is old and well-known in the art of security to authenticate system users in order to protect the

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integrity of software and data being accessed. Therefore, since Yuri's users are a limited set of workers, the Examiner submits that it would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to incorporate with Yuri a user interface means for displaying a window for authenticating a user of the work assignment system in order to protect the integrity of software and data being accessed.

[Claim 20] Yuri discloses that said output means displays a total manhour of the work units of each station in a form of a bar graph in units of stations, and for a bar graph of a station including a work standard having a manhour larger than the average manhour value, a height of the bar graph is increased to limit a height of the bar graph (Figs. 9, 10, 12, 13, 15; col. 14, lines 56-63 – By definition, the height of a bar graph is limited by the height of the bar graph).

[Claim 22] Claim 22 recites limitations already addressed by the rejection of claim 1 above; therefore, the same rejection applies. Furthermore, Yuri teaches a single work distribution simulator (Fig. 1), yet Yuri does not expressly teach a server-client environment (i.e., with multiple clients). However, Official Notice is taken that server-client environments with multiple clients are old and well-known in the art. It is also old and well-known to control manufacturing operations using a server with multiple-clients, especially when manufacturing operations are distributed throughout various locations. Therefore, the Examiner asserts that it would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to modify Yuri to function in a server environment with multiple clients in order to facilitate the allocation of work in a distributed manufacturing environment (i.e., in which workstations are remotely located).

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[Claim 45] As per claim 45, Yuri does not expressly teach that the assignment means comprises code attachment means for causing a user to attach a single group code to a plurality of work units in order to assign the plurality of work units to a single station and that the output means assigns work units having the same group code to a station corresponding to the group code. However, Official Notice is taken that it is old and well-known in the art of machine operation to group together similar tasks and assign the group of tasks to a machine customized to performing said type of tasks. For example, Yuri's invention involves a plurality of stations that are under the control of human operators that move a transport plate between stations to perform respective work handled at each station (col. 14, lines 60-63). It is common practice for a given station in an assembly line to specialize in completion of a given task or small subset of tasks in the manufacturing process. Each station will complete the same task or subset of tasks for various types of orders and/or manufactured products. Therefore, all products requiring assembly of a five inch metal handle, for example, could be sent to station A, regardless of whether the handle is to later be attached to a Teflon skillet or metal frying pan. In order to assign the creation of the five inch metal handle to station A, all products requiring attachment of a five inch metal handle would effectively be associated with a code representing station A (even if the code literally is "station A"). Since Yuri's invention is directed toward a distributed production type of assembly line, the Examiner submits that it would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to modify Yuri to incorporate assignment means that comprises code attachment means for causing a user to attach a single group code to a

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plurality of work units in order to assign the plurality of work units to a single station and output means that assigns work units having the same group code to a station corresponding to the group code in order to facilitate quicker assignment of the manufacture or assembly of a certain type of part to a given station for various orders and/or products.

[Claims 25, 28, 29, 37, 39, 40, 42, 89] Claims 25, 28, 29, 37, 39, 40, 42, and 89 recite limitations already addressed by the rejection of claims 3, 6, 7, 15, 17, 18, 20, and 88 above; therefore, the same rejection applies.

Allowable Subject Matter

11. Claims 46-48 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph (*assuming that Examiner's interpretation of claim 46 being dependent from claim 45 is correct*), set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

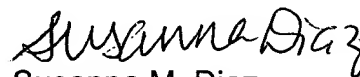
Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susanna M. Diaz whose telephone number is (571) 272-6733. The examiner can normally be reached on Monday-Friday, 10 am - 6 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz can be reached on (571) 272-6729. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Susanna M. Diaz
Primary Examiner
Art Unit 3623

December 16, 2005